

REMARKS

INTRODUCTION:

In accordance with the foregoing, claims 1-3 and 5 have been amended, claim 4 has been canceled and new claim 11 has been added. No new matter has been added.

In the Office Action, the Examiner noted that claims 1-10 were pending in the application, and all claims were rejected. In view of the foregoing, claims 1-3 and 5-11 remain pending in the application. The Examiner's rejections are traversed below. Reconsideration of the claims is respectfully requested.

OBJECTIONS TO THE DRAWINGS:

In the Office Action, at page 2, paragraph 4, the drawings were objected to. Corrections to FIGS. 2 and 3 have been requested and replacement figures have been submitted herewith. Therefore, the outstanding drawing objections should be resolved.

Reconsideration and withdrawal of the outstanding objections to the drawings are respectfully requested.

REJECTION UNDER 35 U.S.C. §112:

Claims 1-10 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. This rejection is traversed and reconsideration is requested.

It is submitted that claims 1-3 and 5, as amended, meet the requirements of 35 U.S.C. § 112, second paragraph.

The examiner did not articulate a reason for the rejection of dependent claims 6-10 under 35 U.S.C. § 112. Applicants assume claims 6-10 were rejected based upon their dependence on the independent claims. It is submitted that claims 1-3 and 5 as amended meet the requirements of 35 U.S.C. § 112, second paragraph. Therefore it is submitted that claims 6-10 meet the requirements of 35 U.S.C. § 112, second paragraph.

REJECTION UNDER 35 U.S.C. §102:

Claims 1-3, 5, 6 and 8-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Milbrath et al., U.S. Patent Number 6,166,371, hereafter referred to as "Milbrath". This rejection is traversed and reconsideration is requested.

This rejection is respectfully traversed because Milbrath does not teach or suggest:

means for outputting an informing signal for informing of the operating area where an operator is located, in accordance with an operator's operation;

means for controlling the automatic machine, in response to the informing signal, so that the automatic machine does not enter the operating area where an operator is located

Milbrath discloses, "a Diffuse Reflective Light Curtain System comprises at least one light curtain **defining a border** of a work zone for a robotic machine" (Milbrath, abstract). In other words, Milbrath discloses that a light curtain can determine when an object breaches the plane of light on a border of a work zone. Milbrath further discloses "Five light curtain frames 12 of various shapes are arranged to form a protected space having three zones. Zone X is defined by light curtains 1 and 5, Zone Y is defined by light curtains 5, 2 and 4, and Zone Z is defined by light curtains 4 and 3. A robotic machine 8 having a moving arm 9 is situated in the proximity of the light curtains 12, such that the moving arm 9 is capable of moving into Zone X, Zone Y or Zone Z. **Light curtain 1 is initially disabled** by the controller to allow a human operator to reach into Zone X during a loading stage and place a part on a platform 11. . . . When the sensor 6 detects that the arm 9 is about to enter Zone X, light curtain 5 is disabled to allow the robotic machine to enter Zone X. **At the same time, light curtain 1 is activated to prevent any objects such as a human limb from being in Zone X during the time that the robotic machine operates in Zone X**" (See Milbrath, FIG. 7 & column 7, line 58 through column 8, line 10). However, because the light curtain only detects when an object or a person breaches the plane of light on the border of the work zone, if an operator was entirely present in Zone X before light curtain 1 was activated, Milbrath would fail to detect the presence of the operator, thereby posing a potential safety hazard for the operator. Thus Milbrath fails to teach or suggest the feature of "means for outputting an informing signal for informing of the operating area where an operator is located" and "means for controlling the automatic machine, in response to the informing signal, so that the automatic machine does not enter the operating area where an operator is located" as recited, for example, in claims 1-3.

Claim 5 recites:

means for outputting an informing signal for informing of the operating area where an operator is staying in accordance with the operator's operation; and

means for stopping the automatic machine when entrance of the automatic machine into the operating area where an operator is staying is detected by the second detecting means corresponding to the operating area, upon receiving the informing signal indicating that the operator is staying.

Therefore, applicants respectfully submit that independent claim 5 patentably distinguishes over the prior art.

Therefore, because Milbrath at least fails to teach or suggest the above disclosed features of independent claims 1-3 and 5, the applicants respectfully request reconsideration of claims 1-3 and 5 under 35 U.S.C. § 102(b).

Claims 6 and 8-10 depend from at least one of independent claims 1-3 and 5, and include all the features of that claim. Therefore applicants respectfully submit claims 6 and 8-10 patentably distinguish over the prior art for at least the reasons mentioned above. Applicants respectfully request reconsideration of claims 6 and 8-10 under 35 U.S.C. § 102(b).

REJECTION UNDER 35 U.S.C. §103:

Claim 7 was rejected under 35 U.S.C. § 103(a) as unpatentable over Milbrath. This rejection is respectfully traversed and reconsideration is requested.

Claim 7 depends from at least one of independent claims 1-3 and 5, and include all the features of that claim and are therefore believed to be allowable for at least the reasons mentioned above. Therefore, applicants respectfully request reconsideration of claim 7 under 35 U.S.C. § 103(a).

NEW CLAIM

New claim 11 is added to set forth the invention with a varying scope. Claim 11 includes:

means for outputting an informing signal containing
information of the operating area where an operator is located; and

means for controlling the automatic machine, in response
to the informing signal, so that the automatic machine does not
enter the operating area where an operator is located and without
stopping the automatic machine.

Therefore, it is submitted that claim 11 patentably distinguishes over the prior art.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

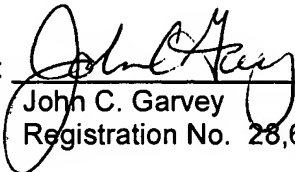
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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IN THE DRAWINGS:

The attached drawing(s) include changes to FIGS. 2 & 3. The sheet containing FIG. 2 replaces the original sheet including FIG. 2. The sheet containing FIG. 3 replaces the original sheet including FIG. 3.

In the Office Action at page 2, line 15, the Examiner objected to the drawings. In order to overcome these objections, replacement figures are submitted herewith. In FIG. 2, in respect to BX1, the "BOX 1" description was deleted and in respect to BX2, the "BOX 2" description was deleted. In FIG. 3, the OT designation was deleted and a comma was place between "CV" and "etc.".

Approval of these changes to the Drawings is respectfully requested.